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May 22, 2007

The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
465 South King Street
Kekuanaoa Building, First Floor
Honolulu, Hawaii 96813

PUBLIC UTILITIES
COMMISSION

2007 MAY 22 P 3:49

FILED

Dear Commissioners:

Subject: Docket No. 2006-0387
MECO 2007 Test Year Rate Case
MECO-1721 and MECO-WP-1721

Enclosed are exhibit MECO-1721 and workpaper MECO-WP-1721. These documents were inadvertently omitted from Maui Electric Company, Limited's ("MECO") Application, Direct Testimonies, Exhibits, and Workpapers that were filed with the Commission on February 23, 2007.

Also enclosed is a compact disc containing portable document format ("PDF") copies of the documents. The electronic Word and Excel versions were submitted to the Consumer Advocate on February 23, 2007.

Sincerely,

Dean K. Matsuura
Director, Regulatory Affairs

Enclosures

cc: The Honorable Charmaine Tavares (w/o disc)
Division of Consumer Advocacy (w/o disc)
Bryan Kageyama (w/o disc)
Sawvel & Associates, Inc. (w/o disc)
Utilitech, Inc. (w/o disc)

SAVINGS FROM REVENUE BONDS

The calculation of the estimated savings from financing with tax-exempt special purpose revenue bonds (“revenue bonds”) instead of financing with “equivalent” taxable debt¹ is shown on the last page of this exhibit. A total savings of about \$47 million is estimated for MECO’s customers over the “original” life² of each of the revenue bonds that are currently outstanding. The savings calculation, which is required by Hawaii law³, is similar to the calculations in Docket Nos. 2006-0386 (HECO 2007 Test Year), 04-0113 (HECO 2005 Test Year), 05-0315 (HELCO 2006 Test Year), and 97-0346 (MECO 1999 Test Year) in that it takes into account the economic differences between selling revenue bonds and equivalent taxable debt: interest costs, taxes, issuance costs (including any redemption costs), issuance discounts, revenue bond investment differentials, trustee fees, and deferred taxes.

Assumptions

In doing the calculation, we try to capture the material factors which affect the estimated savings. The estimated savings are based on assumptions regarding interest rates at the time of issuance and in the future over the life of the issuance. For example, we must make informed assumptions of interest rates and issuance costs of taxable debt since we didn’t actually issue the taxable bonds and therefore, don’t know what their costs would have been with any certainty. We also make assumptions for factors that are dependent on future conditions which can’t be known with certainty, now. For example, we don’t know for sure that a series of revenue bonds will be outstanding for its entire life, but for calculating savings, we assume they will be. As

¹ Taxable debt with similar characteristics such as maturity date and call provisions.

² The life of a bond, assuming the bond remains outstanding until its original maturity date.

³ Hawaii Revised Statutes Section 39A-208(b) and enabling legislation such as Act 206, 1998 Session Laws of Hawaii (Section 3).

another example, there are deferred tax effects that offset some of the savings, but the cost of the deferred tax difference depends on the rate of return on rate base in each year. We must make assumptions of the rate of return over the life of each series of revenue bonds in order to estimate the cost of the deferred tax difference.

Total Savings Versus Annual Savings

Estimated savings change from year to year over the life of a bond issue, mostly because of the impact of deferred taxes. Therefore, we have chosen to show total savings over the life of the bonds instead of savings on an annual basis.

Interest Costs

Revenue bonds have a lower interest cost than taxable debt with similar characteristics. The interest earned by buyers of revenue bonds is not taxable income for Federal or State of Hawaii income tax purposes (with some limited exceptions). This means that the revenue bonds can bear a lower interest rate than other forms of debt, and the owners of the bonds will still get the same after-tax return.

Column (D) of the savings calculation shows the revenue requirements of interest costs over the original lives of MECO's revenue bonds that are currently outstanding. It also shows the revenue requirements of estimated interest costs of equivalent taxable debt.

Amortized Costs and Trustee Fees

Issuance Costs: Revenue bonds currently have lower issuance costs than equivalent taxable debt, primarily because of the difference in underwriting fees and/or insurance costs. These fees are charged by underwriters for their work in carrying out marketing efforts for a bond sale and for taking the risk (with some exceptions) that they will be unable to resell the bonds without incurring a loss.

Issuance Discounts: Some revenue bonds were sold at a discount to secure a lower annual interest rate and reduce the overall cost of the bonds. These discounts are included in the total cost of revenue bonds. For taxable debt, we used interest rate estimates from underwriters based on issuances at par (that is, no discount). According to Goldman Sachs (the lead underwriter that we used for the most recent revenue bonds sold), taxable debt is commonly sold at par or with a small discount.

“Ongoing” Trustee Fees: Ongoing trustee fees consist of recurring annual fees from a bond trustee over the life of the bonds. Basically, bond trustees serve to protect the collective interest of the bondholders. As part of its duties, a bond trustee receives interest, principal, and redemption payments (if any) from the Companies and disburses them to bondholders. Ongoing trustee fees for revenue bonds are typically at about the same level as fees for equivalent taxable debt.

Construction Fund Trustee Fees: For revenue bond financings (except refunding issues), there are fees from construction fund trustees for managing the investment of undrawn revenue bond proceeds in the construction fund. These fees are generally expensed.

Column (E) of the savings calculation shows the total revenue requirements of issuance costs, redemption costs, issuance discounts, investment differentials, and trustee fees over the original lives of MECO’s revenue bonds that are currently outstanding. It also shows the revenue requirements of estimated comparable costs of equivalent taxable debt.

Accumulated Deferred Taxes

Accumulated deferred tax balances reduce the Company’s rate base. When assets are financed with revenue bonds, accumulated deferred tax balances are generally not as large as they would be if the assets were financed with other forms of debt. This is because assets financed

with revenue bonds must be depreciated more slowly for tax purposes than if they had been financed with taxable debt. Thus, when assets are financed with revenue bonds, the result is that our tax depreciation is closer to our book depreciation, deferred taxes are less, and the rate base is higher than would be the case if those assets were financed with other types of debt. This increases revenue requirements somewhat, but for the revenue bonds MECO has issued, the deferred tax impact does not offset all of the savings from the interest rate reduction.

Column (F) of the savings calculation shows the revenue requirement effect of the average accumulated deferred tax balances of the assets estimated to be financed with revenue bonds. It also shows the same calculation assuming the assets were financed with equivalent taxable debt.

Conclusion

Clearly, some of the interest cost savings from revenue bonds are offset by other economic factors. However, it has been to the benefit of the Company's customers that revenue bonds finance part of the Company's construction program.

Maui Electric Company, Ltd.

**Estimated Savings Due to Special Purpose Revenue Bond Financing
(\\$ in Thousands)**

	(A)	(B)	(C)	(D) = [(A)*(B)/(1-R)]*C	(E)	(F)	(G) = (D)+(E)+(F)
	Revenue Requirements Over Original Life of Security *						
Series **	Interest Rate	Outstanding as of 12/31/05	Original Life (in years)	Interest	Amortized Costs and Trustee Fees	Average Accumulated Deferred Taxes	Total
Costs of Financing with TAXABLE DEBT:							
Series 1993	7.30%	\$ 30,000	30	\$ 72,107	\$ 403	\$ (9,988)	\$ 62,523
Series 1996A	8.40%	20,000	30	55,315	293	(6,658)	48,949
Series 1996B	7.75%	35,000	30	89,310	576	(11,652)	78,234
Series 1997A	7.76%	20,000	30	51,100	240	(7,016)	44,324
Refunding Series 1998A (1987)	6.75%	7,720	14	8,007	114	(1,604)	6,517
Refunding Series 1999B (1988)	7.40%	9,000	19	13,888	262	(154)	13,996
Refunding Series 1999D (1990A)	7.80%	1,000	20	1,712	33	(18)	1,727
Refunding Series 2000 (1990B&C)	7.75%	20,000	20	34,023	592	(359)	34,256
Refunding Series 2005A (1995A)	5.25%	2,000	20	2,305	132	(36)	2,401
		<u>\$ 144,720</u>		<u>\$ 327,766</u>	<u>\$ 2,645</u>	<u>\$ (37,485)</u>	<u>\$ 292,927 (H)</u>
Costs of Financing with REVENUE BONDS:							
Series 1993	5.45%	\$ 30,000	30	\$ 53,833	\$ 889	\$ (789)	\$ 53,933
Series 1996A	6.20%	20,000	30	40,828	1,121	(526)	41,423
Series 1996B	5 7/8%	35,000	30	67,703	1,729	(920)	68,511
Series 1997A	5.65%	20,000	30	37,206	759	(554)	37,411
Refunding Series 1998A (1987)	4.95%	7,720	14	5,872	181	(1,604)	4,449
Refunding Series 1999B (1988)	5.75%	9,000	19	10,791	376	(154)	11,013
Refunding Series 1999D (1990A)	6.15%	1,000	20	1,350	33	(18)	1,365
Refunding Series 2000 (1990B&C)	5.70%	20,000	20	25,023	647	(359)	25,311
Refunding Series 2005A (1995A)	4.80%	2,000	20	2,107	103	(36)	2,174
		<u>\$ 144,720</u>		<u>\$ 244,713</u>	<u>\$ 5,837</u>	<u>\$ (4,959)</u>	<u>\$ 245,591 (I)</u>
Estimated Savings to Customers (over original life of revenue bonds) = (H)-(I)							<u><u>\$ 47,336</u></u>

* Revenue requirements = nontaxable expenses grossed up for revenue taxes (R), and taxable expenses grossed up for revenue taxes and income taxes. Refer to WP-1721, p.1 and p.4 for Amortized Costs/Trustee Fees and Average Accumulated Deferred Taxes calculations, respectively, for Series 1993, 1996A, and 1996B. Revenue Requirements information for other Series are contained in the "Estimated Savings From Special Purpose Revenue Bond Financing" document filed with the Commission for the respective Series.

** See reports on savings on file with the Commission.

Note: Totals may not add exactly due to rounding.

Maui Electric Company, Ltd.

Estimated Amortization Costs and Fees Over Life of Security

Series ***	Outstanding as of 12/31/05	Revenue Bond Revenue Requirements				Taxable Debt Revenue Requirements			
		(A)	(B)	(C)=(A)+(B)	(D)=(C)/(1-R)	(E)	(F)	(G)=(E)+(F)	(H)=(G)/(1-R)
		Amortization Costs*	Other Recurring Fees**	Total Amortization Costs and Recurring Fees	Revenue Requirements	Amortization Costs*	Other Recurring Fees**	Total Amortization Costs and Recurring Fees	Revenue Requirements
1993	30,000,000	764,910	45,000	809,910	888,888	322,500	45,000	367,500	403,336
1996A	20,000,000	985,140	36,000	1,021,140	1,120,716	226,680	39,990	266,670	292,674
1996B	35,000,000	1,491,000	84,000	1,575,000	1,728,585	420,000	105,000	525,000	576,195
		3,241,050	165,000	3,406,050	3,738,188	969,180	189,990	1,159,170	1,272,205

* Annual amortization costs include issuance costs, redemption costs, investment income differentials, and issuance discounts. Refer to WP-1721, p.2 for calculation.

** Other annual fees include trustee fees and/or insurance premiums. Refer to WP-1721, p.3 for calculation.

*** See reports on savings on file with the Commission.

R = Represents revenue taxes as calculated as follows:

Public Service Company Fee	5.885%
Public Utilities Commission Fee	0.5%
Franchise Royalty Tax	2.5%
Total Revenue Taxes	<u>8.885%</u>

Maui Electric Company, Ltd.

Estimated Amortization Costs Over Life of Security

	(A)	(B)	Revenue Bond Costs		Taxable Debt Costs	
			(C)	(D)=(C)*(B)	(E)	(F)=(E)*(B)
Series **	Outstanding as of 12/31/05	Assumed Life (in years)	Annual Amortization Costs *	Amortization Costs Over Life	Annual Amortization Costs *	Amortization Costs Over Life
1993	30,000,000	30	25,497	764,910	10,750	322,500
1996A	20,000,000	30	32,838	985,140	7,556	226,680
1996B	35,000,000	30	49,700	1,491,000	14,000	420,000
			<u>108,035</u>	<u>3,241,050</u>	<u>32,306</u>	<u>969,180</u>

* Annual amortization costs include issuance costs, redemption costs, investment income differentials, and/or issuance discounts. Obtained amounts per the respective series' "Estimated Savings From Special Purpose Revenue Bond Financing" document on file with the Commission.

** See reports on savings on file with the Commission.

Maui Electric Company, Ltd.

Estimated Other Recurring Fees Over Life of Security

	(A)	(B)	Revenue Bond Costs		Taxable Debt Costs	
			(C)	(D)=(C)*(B)	(E)	(F)=(E)*(B)
Series **	Outstanding as of 12/31/05	Assumed Life (in years)	Other Annual Recurring Fees *	Other Recurring Fees Over Life	Other Annual Recurring Fees *	Other Recurring Fees Over Life
1993	30,000,000	30	1,500	45,000	1,500	45,000
1996A	20,000,000	30	1,200	36,000	1,333	39,990
1996B	35,000,000	30	2,800	84,000	3,500	105,000
			<u>5,500</u>	<u>165,000</u>	<u>6,333</u>	<u>189,990</u>

* Other annual fees include trustee fees and/or insurance premiums. Obtained amounts per the respective series' "Estimated Savings From Special Purpose Revenue Bond Financing" document on file with the Commission.

** See reports on savings on file with the Commission.

Maui Electric Company, Ltd.

Average Accumulated Deferred Taxes Revenue Requirements (Over life of Security)
(\$ in Thousands, unless indicated otherwise)

	(A)	(B)	(C)	(D)=(A)*(B)	(E)=(A)*(C)
		WP-1721, p.5 Average Accumulated Deferred Taxes Revenue Requirements Per \$1 Million of Debt (non-RB)	WP-1721, p.5 Average Accumulated Deferred Taxes Revenue Requirements Per \$1 Million of Debt (RB)	Average Accumulated Deferred Taxes Revenue Requirements (non-RB)	Average Accumulated Deferred Taxes Revenue Requirements (RB)
Series *	Outstanding as of 12/31/05 (\$ in millions)				
1993	30	(333)	(26)	(9,988)	(789)
1996A	20	(333)	(26)	(6,658)	(526)
1996B	35	(333)	(26)	(11,652)	(920)

* See reports on savings on file with the Commission.

Calculation of Average Accumulated Deferred Taxes Revenue Requirements
Revenue Bond (RB) Financing vs. Taxable Debt (non-RB) Financing
MACRS Depreciation Method

Year	Depreciation Rate				Depreciation				Deferred Tax Base				Deferred Taxes		Accumulated Deferred Taxes		Average Accumulated Deferred Taxes		Average Accumulated Deferred Taxes Revenue Requirements	
	BOOK Life:		TAX Life:		TAX Life:		TAX Life:		(G) =(E)-(D)	(H) =(F)-(D)	(I) =(G)*(Y)	(J) =(H)*(Y)	(K) prior year(K)	(L) = (J)+ px(L)	(M) = Avg of (K)+px(K)	(N) = Avg of (L)+px(L)	(O) = -[(M)*(Z)]	(P) = -[(N)*(Z)]		
	30-Year	20-Year	MACRS	Class	30-Year	20-Year	MACRS	Class												
(non-RB / RB)	(non-RB / RB)	(non-RB)	(RB)	(non-RB)	(RB)	(non-RB)	(RB)	(non-RB)	(RB)	(non-RB)	(RB)	(non-RB)	(RB)	(non-RB)	(RB)	(non-RB)	(RB)	(non-RB)	(RB)	
1	0.00%	3.75%	1.67%	\$ -	\$ 37,500	\$ 16,667	\$ 37,500	\$ 16,667	\$ 37,500	\$ 16,667	\$ 14,591	\$ 6,485	\$ 14,591	\$ 6,485	\$ 7,296	\$ 3,243	\$ (986)	\$ (438)		
2	3.33%	7.22%	3.33%	33,333	72,190	33,333	72,190	33,333	38,857	-	15,119	-	29,710	6,485	22,151	6,485	(2,993)	(876)		
3	3.33%	6.68%	3.33%	33,333	66,770	33,333	66,770	33,333	33,437	-	13,010	-	42,721	6,485	36,215	6,485	(4,893)	(876)		
4	3.33%	6.18%	3.33%	33,333	61,770	33,333	61,770	33,333	28,437	-	11,065	-	53,785	6,485	48,253	6,485	(6,520)	(876)		
5	3.33%	5.71%	3.33%	33,333	57,130	33,333	57,130	33,333	23,797	-	9,259	-	63,045	6,485	58,415	6,485	(7,893)	(876)		
6	3.33%	5.29%	3.33%	33,333	52,850	33,333	52,850	33,333	19,517	-	7,594	-	70,639	6,485	66,842	6,485	(9,031)	(876)		
7	3.33%	4.89%	3.33%	33,333	48,880	33,333	48,880	33,333	15,547	-	6,049	-	76,688	6,485	73,663	6,485	(9,953)	(876)		
8	3.33%	4.52%	3.33%	33,333	45,220	33,333	45,220	33,333	11,887	-	4,625	-	81,313	6,485	79,000	6,485	(10,674)	(876)		
9	3.33%	4.46%	3.33%	33,333	44,620	33,333	44,620	33,333	11,287	-	4,392	-	85,704	6,485	83,509	6,485	(11,283)	(876)		
10	3.33%	4.46%	3.33%	33,333	44,610	33,333	44,610	33,333	11,277	-	4,388	-	90,092	6,485	87,898	6,485	(11,876)	(876)		
11	3.33%	4.46%	3.33%	33,333	44,620	33,333	44,620	33,333	11,287	-	4,392	-	94,484	6,485	92,288	6,485	(12,469)	(876)		
12	3.33%	4.46%	3.33%	33,333	44,610	33,333	44,610	33,333	11,277	-	4,388	-	98,872	6,485	96,678	6,485	(13,062)	(876)		
13	3.33%	4.46%	3.33%	33,333	44,620	33,333	44,620	33,333	11,287	-	4,392	-	103,263	6,485	101,067	6,485	(13,655)	(876)		
14	3.33%	4.46%	3.33%	33,333	44,610	33,333	44,610	33,333	11,277	-	4,388	-	107,651	6,485	105,457	6,485	(14,249)	(876)		
15	3.33%	4.46%	3.33%	33,333	44,620	33,333	44,620	33,333	11,287	-	4,392	-	112,043	6,485	109,847	6,485	(14,842)	(876)		
16	3.33%	4.46%	3.33%	33,333	44,610	33,333	44,610	33,333	11,277	-	4,388	-	116,430	6,485	114,237	6,485	(15,435)	(876)		
17	3.33%	4.46%	3.33%	33,333	44,620	33,333	44,620	33,333	11,287	-	4,392	-	120,822	6,485	118,626	6,485	(16,028)	(876)		
18	3.33%	4.46%	3.33%	33,333	44,610	33,333	44,610	33,333	11,277	-	4,388	-	125,210	6,485	123,016	6,485	(16,621)	(876)		
19	3.33%	4.46%	3.33%	33,333	44,620	33,333	44,620	33,333	11,287	-	4,392	-	129,601	6,485	127,406	6,485	(17,214)	(876)		
20	3.33%	4.46%	3.33%	33,333	44,610	33,333	44,610	33,333	11,277	-	4,388	-	133,989	6,485	131,795	6,485	(17,807)	(876)		
21	3.33%	2.23%	3.33%	33,333	22,310	33,333	22,310	33,333	(11,023)	-	(4,289)	-	129,700	6,485	131,845	6,485	(17,814)	(876)		
22	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	116,730	6,485	123,215	6,485	(16,648)	(876)		
23	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	103,760	6,485	110,245	6,485	(14,895)	(876)		
24	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	90,790	6,485	97,275	6,485	(13,143)	(876)		
25	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	77,820	6,485	84,305	6,485	(11,391)	(876)		
26	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	64,850	6,485	71,335	6,485	(9,638)	(876)		
27	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	51,880	6,485	58,365	6,485	(7,886)	(876)		
28	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	38,910	6,485	45,395	6,485	(6,133)	(876)		
29	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	25,940	6,485	32,425	6,485	(4,381)	(876)		
30	3.33%	3.33%	3.33%	33,333	-	33,333	-	33,333	(33,333)	-	(12,970)	-	12,970	6,485	19,455	6,485	(2,629)	(876)		
31	3.33%	1.67%	1.67%	33,333	-	16,667	-	33,333	(33,333)	(16,667)	(12,970)	(6,485)	(0)	-	6,485	3,243	(876)	(438)		
Total	100.00%	100.00%	100.00%	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -	\$ -	\$ (0)	\$ -	\$ 2,464,003	\$ 194,550	\$ 2,464,003	\$ 194,550	\$ (332,917)	\$ (26,286)		

Financing Amount:
Combined Effective Income Tax Rate (WP-1721, p.6): \$ 1,000,000 (X)
Weighted Revenue Requirement (WP-1721, p.6): 38.91% (Y)
13.51% (Z)

Maui Electric Company, Ltd

Weighted Revenue Requirement

	(A)	(B)	(C) = (A)*(B)	(D) = (C) + Gross-Up of Taxes ***
<u>Composite Embedded Cost of Capital *</u>				
	<u>Capitalization</u>	<u>Cost</u>	<u>Cost of Capital</u>	<u>Weighted Revenue Requirement **</u>
Long-Term Debt	44.03%	6.54%	2.88%	3.16%
Hybrid Securities	5.75%	8.58%	0.49%	0.54%
Preferred Stock	1.38%	8.48%	0.12%	0.21%
Common Equity	48.84%	10.94%	5.34%	9.60%
	<u>100.0%</u>		<u>8.83%</u>	<u>13.51%</u>

* Composite cost of capital is based on capital structure and cost rates accepted by the PUC in amended Decision and Order No. 16922, Docket No. 97-0346, filed on April 6, 1999.

** Revenue requirements = nontaxable expenses grossed up for revenue taxes, and taxable expenses grossed up for revenue taxes and income taxes.

*** Taxes referred to are Income and Revenue Taxes. Tax rates used for the above calculation are as follows:

Combined effective Federal/State income tax rate	38.91%
Public Service Company Tax	5.885%
Franchise Royalty Tax	2.500%
Public Utility Commission Fee	0.500%
Total Revenue Tax Rate	<u>8.885%</u>